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(54) **POLYMERIC COMPLEXES FOR THE TRANSFECTION OF NUCLEIC ACIDS, WITH RESIDUES CAUSING THE DESTABILISATION OF CELL MEMBRANES**

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(58) Field of Search 424/486; 435/320.1; 435/455, 325, 69.1; 514/44

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(57) **ABSTRACT**

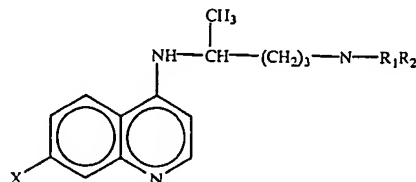
The complex has at least one negatively charged nucleic acid bonded to at least one positively charged polymeric conjugate

The conjugate containing a polylysine formed from monomers having free NH_3^+ groups, and having at least 10% of the free NH_3^+ groups substituted by residues which can be protonated in a weakly acid medium causing destabilization of cell membranes.

Optionally, some of the free NH_3^+ groups can be substituted by a molecule with a recognition signal by a cell membrane receptor.

The free NH_3^+ groups of the said polylysine make up at least 30% of the monomers of the polymeric conjugate.

The residue that causes the destabilization of cell membrane in weak acid of quinolines of the formula:



where R_1 is hydrogen, R_2 is $-(\text{CH}_2)_n-13 \text{ CO}_2\text{H}$, X is hydrogen or chlorine and n is an integer from 1 to 10.

The signal is a simple oside or a disaccharide or peptide.

15 Claims, 9 Drawing Sheets